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An ERTS-1 Project  
INVESTIGATION OF THE DETECTION & MONITORING OF  
FOREST INSECT INFESTATIONS IN THE SIERRA NEVADA  
MOUNTAINS OF CALIFORNIA

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Progress Report  
August 1, through September 30, 1973

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16. Abstract  Activities during this reporting period have been limited due to the lack of color composite from ERTS-1, and U-2 imagery for the 1973 season. Conferences were held with personnel from NASA-AMES and with other ERTS-1 investigators. An exhibit, on Project accomplishment, was set up and manned at the National Meeting of the Society of American Foresters at Portland, Oregon, Sept 23 through 27, 1973. Ground truth data collected during the preceding reporting period have been analyzed and added to the data from the 1972 period. No additional significant results are reported.					
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**Figure 2. Technical Report Standard Title Page**

## INTRODUCTION

This progress report covers the period of August 1 through September 30, 1973 for the investigation of the Detection and Monitoring of Forest Insect Infestations in the Sierra Nevada Mountains of California.

Activities during this period have been limited due to the fact that no ERTS-1 color composites for the 1973 season have as yet been received, and further no U-2 imagery had been received at the end of the reporting period, although the target area was flown on June 29, 1973. Part of this delay was due to the fact that the film was lost in transit and duplicates had to be made.

Several conferences were held with personnel from NASA-AMES, and with other ERTS-1 investigators.

The Author set up and manned an exhibit, to illustrate the accomplishment on the Project, at the National Meeting of the Society of American Foresters in Portland.

Ground truth data which had been collected during the preceding reporting period was analyzed.

## GROUND TRUTH

Ground truth data from six mortality field plots, which were collected during the preceding reporting period, were analyzed and added to the data for 1972. This completed the initial analysis of

these data. All of these plots were from areas heavily damaged. It is interesting to note, that the addition of these six plots changed the earlier estimates by no significant degree. Earlier estimates were that 74 percent of the trees were killed and 82 percent of the volume in the areas classified as heavy damage. By adding the 1973 data the estimates are that 76 percent of the trees were killed and 84 percent of the volume.

#### CONFERENCES

A conference was held with Dr. John Tremore, from NASA-AMES, concerning display material from California ERTS-1 Projects on significant results. The Author furnished him with two examples and is arranging for a more complete set in the near future.

Conferences were also held with two other ERTS-1 investigators, Dr. J. R. Shay, and Dr. David Paine from Oregon State University concerning their success in detecting tussock moth defoliation from ERTS-1 imagery in Oregon and Washington. Their results to date have been negative.

#### EXHIBITS

The Author set up and manned an exhibit with illustrative photos of accomplishment in 1972 on the Project, at the National Meeting of the Society of American Foresters in Portland, from September 23 through September 27, 1973.

### UNDERFLIGHT SUPPORT

Analysis of underflight support, from repeat photos of sample areas at a scale of 1/5,000 taken and processed by our sub-contractor, Earth Satellite Corporation, have been completed. We are still waiting for the U-2 coverage, flown on June 29, 1973 which was processed and shipped on August 30, 1973 but was lost in transit.

### SIGNIFICANT RESULTS

Since we have had no ERTS-1 color composites for the 1973 season, no additional significant results are possible.

Respectfully submitted,

NATURAL RESOURCES MANAGEMENT CORPORATION



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